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Real World Scenarios: Lessons Learned for Federal Agency Disaster Planning

Electronic Interruptions: U.S. Geological Survey (USGS) Internet Shutdown in FY 2002

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CENDI

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U.S. Geological Survey

Background

- **The Cobell law suit has been ongoing since 1999. Originally it was filed against Secretary Babbit. USGS has stated all along that it does not house or provide any individual Indian trust data.**
- **In March 2001, plaintiffs filed their motion for the Special Master to investigate the Department of the Interior (DOI) for failing to implement adequate security measures. The court investigated by hiring a hacker who found numerous deficiencies in the security of the DOI trust-related information technology systems.**
- **Result: On December 5, 2001, District Court Judge Royce C. Lamberth ordered all DOI offices and agencies to immediately disconnect from the Internet all information technology systems that house or provide access to individual Indian trust data and all computers within the custody and control of DOI, its employees, and contractors who have access to individual Indian trust data.**
- **In meeting the requirements of the court, DOI and USGS ability to conduct a large portion of our daily business was impacted.**

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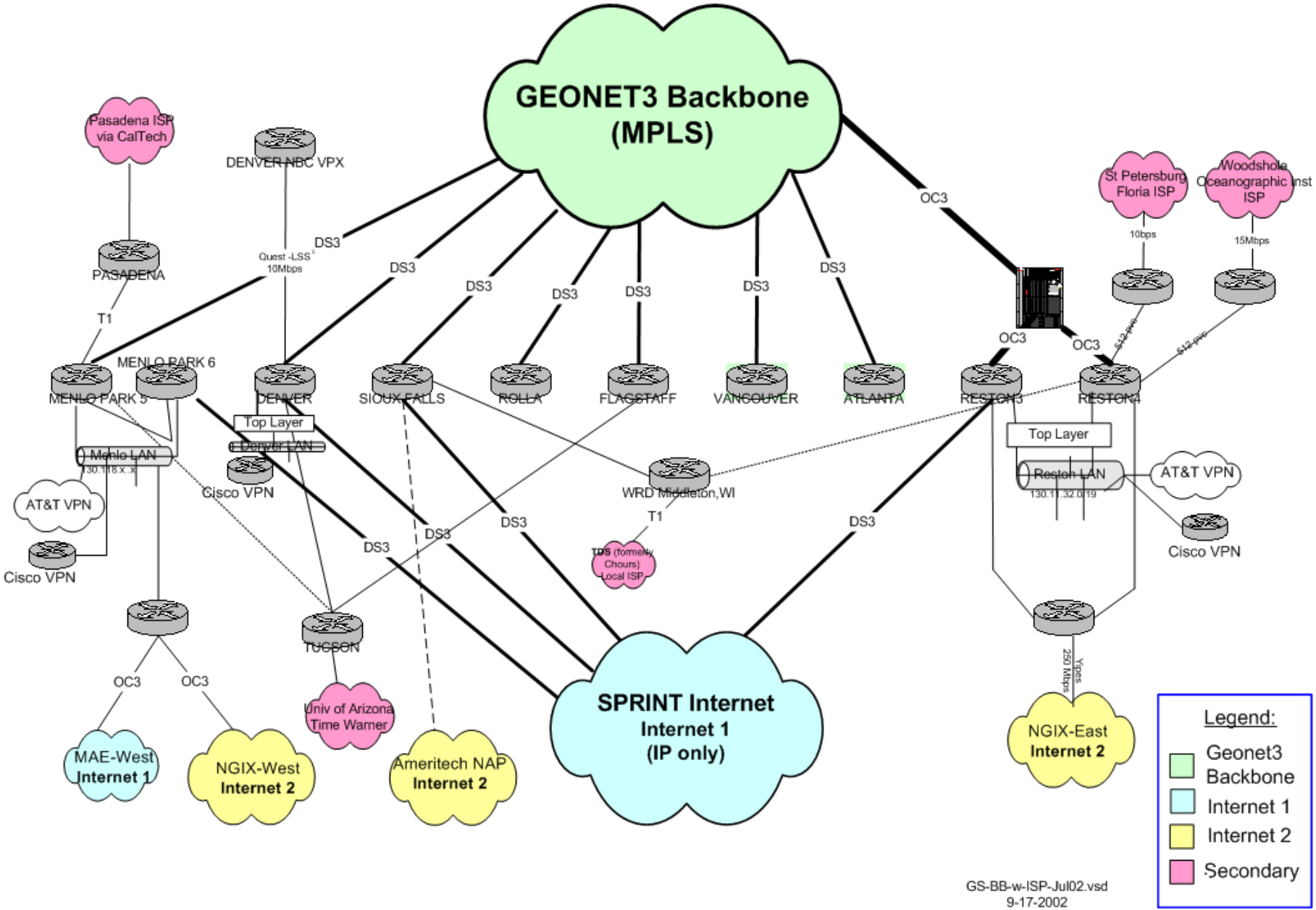
GEONET3 Backbone with Primary Internet1 ISP & Secondary ISP's and Internet2 Connections



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GEONET3 – USGS Wide-Area Network Architecture

- **GEONET3 consists of a high-speed backbone, lower speed access locations, and access to both Internet 1 and Internet 2.**
- **The requirements of security impose significant (and growing) protection efforts upon the complete spectrum of USGS information technology owners.**

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USGS Appealed

- **USGS recertified to the court that it does not house or provide any individual Indian trust data.**
  - **Involved collecting over 1,000 individual certifications from within the USGS.**
- **For public health and safety reasons, most USGS Internet access was restored within one week of the shutdown. However, because of the shared network in Alaska, Alaskan USGS offices Internet access was not restored for approximately four months.**
- **USGS was authorized to allow other DOI bureaus access through the USGS information technology resources for the purpose of accomplishing critical administrative functions limited to payroll, procurement, and financial payments during the current legal proceedings.**

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Impacts

- **Geologic Hazards Monitoring and Warning Systems:**
  - **National Earthquake Information Center Operations. With the loss of connectivity, they lost the capability to accurately locate and determine the magnitude of earthquakes and access to data to provide tsunami warnings.**
  - **Volcano Observatories were not able to inform airlines and the FAA of volcanic ash clouds. Also, access to seismic data and volcano information from other countries was lost.**
  - **Geomagnetism – Our capability to alert other Federal agencies to changes in the earth's magnetic field was lost.**
  - **Albuquerque Seismic Laboratory lost a significant number of stations and they were unable to discharge their responsibilities in regard to public safety.**

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Impacts (Continued)

- **Energy and Minerals – The loss of connectivity interfered with the USGS ability to provide critical information on global energy resources and strategic minerals.**
- **Real-time Water Data – No real-time dissemination of information about floods, droughts, streamflow, and water quality at approximately 8,000 USGS gaging stations and monitoring wells nationwide was possible.**
- **The National Biological Information Infrastructure, which transfers critical biological information, was shut down.**
- **Geospatial Data – The USGS has responsibility for flight operations of two international land remote sensing satellites: Landsat 5 and Landsat 7. The loss severely impacted access to their data.**
- **Homeland Security Issues – The USGS could not receive and analyze data about Afghanistan.**

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Other Impacts

- **Payroll – The majority of USGS uses automated payroll system.**
- **Financial payments - Federal law requires electronic payments.**
- **Shutdown took place at the end of the calendar year. Contracts with non-Federal customers were affected.**
- **The USGS lost the ability to communicate by e-mail.**
- **Employees had to rely on faxing and express mail to communicate.**
- **There was no access to electronic telephone directories.**

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